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4-2-02
D. Bell

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
DANIEL J. DEUTSCH, ET AL.

Serial No. 09/756,458

Filing Date: January 9, 2001

For: Light for Vehicle Wheels

Examiner: Laura K. Tso

Art Unit: 2875

AMENDMENT AND RESPONSE TO OFFICE ACTIONHonorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

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MAR 28 2002

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Sir:

In response to the Office Action mailed on February 13, 2002, please amend the above application as follows and enter the Applicants' response set forth below. None of the amendments made add new matter and all are fully supported in the application as filed.

In the Specification:

Please make the following amendments where indicated. No new matter is added and only incorrect reference numbers have been changed.

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On page 4, please delete the sentence beginning at line 5 and ending mid-way through line 7, and substitute the following sentence:

A¹ FIGS. 1 through 7 illustrate the present invention, a motion activated wheel light 10 for a vehicle wheel 30 having an air valve stem.

On page 4, please delete the sentence beginning on line 13 and ending on line 15, and substitute the following sentence:

A² The housing 12 serves to connect the wheel light 10 to the air valve stem of a vehicle wheel 30, as shown in FIG. 7.

On page 4, please delete the sentence beginning on line 22 and ending on line 28, and substitute the following sentence:

A³ A motion activated switch 18 is connected to the power source 14 and to the light source 16 through the electrical circuit so as to close the circuit and energize the light source 16 responsive to movement of the wheel 30, the movement being preferably rotational motion when the vehicle is moving.

On page 4, please delete the sentence beginning on line 29 and ending on line 32, and substitute the following sentence:

A⁴ The skilled artisan will know that vehicle wheels 30, particularly in modern vehicles having tubeless pneumatic tires, comprise air valves wherein the valve stem is connected directly to the wheel rim.

On page 5, please delete the sentence beginning on line 14 and ending on line 18, and substitute the following sentence:

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A⁵
As shown in FIGS. 3-5 and 7, the housing 12 preferably has threads 15 complementary to those found on a standard air valve stem and connects the wheel light 10 to the wheel 30 by screwing onto the valve stem.

On page 5, please delete the sentence beginning on line 26 and ending on line 29, and substitute the following sentence:

A⁶
For example, the light source 16 itself may comprise a shape which lights up as the wheel 30 is rotating to form the visually perceptible light image, or design.

On page 5, please delete the sentence beginning on line 31 and ending on line 34, and substitute the following sentence:

A⁷
The light source 16 itself may emit colored light, or the housing 12 may comprise material having one or more colors to thereby produce a visually perceptible image in color as the wheel 30 rotates.

On page 7, please delete the paragraph beginning on line 9 and ending page 8, line 2, and substitute the following paragraph (only FIG. references and reference numbers have been changed):

A⁸
In another embodiment of the wheel light 10', as shown in FIGS. 4-7, the wheel light includes a motion sensitive switch 18' connected to the power source 14 and to the light source 16 to thereby control power flow energizing the light source 16. As illustrated in FIG. 7, the switch 18' is motion activated, and more specifically, is responsive to a centrifugal force generated when

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the vehicle wheel 30 is moving in a rotational motion. Those skilled in the art will know how to construct a mechanism as shown in FIGS. 4 and 6, comprising a biasing member, preferably a spring, calibrated to respond to an applied force so as to close an electrical contact and energize the light source 16. An embodiment of the switch 18' shown in FIGS. 4 and 6 includes a first biasing member 20, a second biasing member 22, a switch contact 24', and a circuit board 26 having an integrated circuit 28. When the wheel light 10' is connected to an air valve stem, the applied force will be a centrifugal force generated when the wheel 30 rotates. This force will act on the wheel light 10' in a downward direction, the lower end of the wheel light being at that end of the housing 12' comprising the connector for the air valve stem, preferably threads 15 as shown in FIG. 7. The force moves the power source 14 toward the lower end of the housing, thereby also moving the biasing member to touch switch contact 24' to thereby close the electrical circuit and energize the light source.

In the Claims: ✓

Please substitute the following amended Claims as set forth below. An attachment hereto is captioned "VERSION WITH MARKINGS TO SHOW AMENDMENTS MADE" and includes a marked-up version of the amended specification and claims, showing the changes made by the current amendment.

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1. A motion activated light for a vehicle wheel having an air valve stem, said light comprising:

a connector complementary to the air valve stem for connecting said light thereto;

a power source connected in an electrical circuit;

a light source connected to said power source through the electrical circuit; and

a switch connected to the electrical circuit, said switch responsive to movement of the wheel to thereby energize the light source.

8. A motion activated light for a vehicle wheel having an air valve with a threaded stem, said light comprising:

a housing having threads complementary to the threaded stem for connecting said light to the air valve stem;

a power source connected to an electrical circuit;

a light emitting diode connected to the electrical circuit; and

a switch connected to close the electrical circuit responsive to movement of the wheel so as to energize the light emitting diode.

16. A lighted wheel for a vehicle, comprising:

a pneumatic tire comprising an air valve having a stem; and

a motion activated light connected to the air valve stem;

wherein the motion activated light comprises an electrical circuit having a power source, a light source, and a switch sensitive to motion of the wheel and connected to close the circuit to thereby energize the light source responsive to motion of the wheel.

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- A¹²
24. A method of lighting a vehicle wheel having an air valve stem, the method comprising:
connecting a light source to the air valve stem of the wheel, said light source
activated by sufficient wheel motion; and
emitting light by causing the wheel to move sufficiently to activate the light
source.

- A¹³
28. A method of forming a visually perceptible light image adjacent a rotating wheel on a
moving vehicle, the wheel having an air valve stem, comprising:
connecting a light to the air valve stem of the wheel, the light capable of being
activated by sufficient wheel rotation and comprising a predetermined shape for
forming the light image; and
causing the vehicle to move so as to impart sufficient rotation to the wheel to
activate the light source to emit light, thereby forming the visually perceptible light
image.
- 09/756,458-010901

REMARKS

Applicants greatly appreciate the Examiner's initial determination that Claims 14, 15, 22 and 23 include allowable matter. These remarks are offered in support of the patentability of the remaining claims in view of the cited art to Duke (US 6,070,997), and also address the remaining concerns expressed by the Examiner.

The Specification Has Been Corrected, and Avoids Drawing Corrections

Applicants have checked the specification for grammatical, idiomatic, and spelling and other minor errors, as suggested by the Examiner. The "spell check" and "grammatical check"

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functions of undersigned counsel's standard word-processing software have been employed, and counsel has reviewed the document to check the specification, however, counsel believes that the specification is correct in its spelling and use of language as originally filed.

Counsel appreciates the Examiner's detection of some confusing misnumbering in the specification and drawings between the IC and the wheel. The correct reference number for the IC is **28**, and for the wheel **30**. These corrections have been made in the specification, as noted in the attachment captioned **VERSION WITH MARKINGS TO SHOW AMENDMENTS MADE**.

The specification has also been corrected to reflect several reference numbers having prime notation as indicative of an alternate embodiment shown in FIGS. 4-7. Accordingly, the drawings require no further correction, as all reference numbers shown therein now correctly match the written specification. Undersigned counsel apologizes for any confusion, and appreciates the Examiner's careful review of the application in that regard.

The Claims Are Novel Over The Cited Reference

The description of the present invention, as originally filed, clearly indicate that the Applicants' light for vehicle wheels includes a switch which activates a light source in response to motion of the wheel. In this regard, Applicants have made minor clarifying amendments in the independent claims so that it is clear that the motion to which the switch is responsive is indeed wheel motion.

Applicants respectfully point out that the Duke reference teaches a wheel light which is turned on and off, not by wheel motion, but manually by the user rotating the housing and sleeve assembly around the longitudinal central axis of the device. Specifically, please see Duke at column 3, lines 10-29. This limitation of the Duke device is also reflected in all its

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independent claims, for example: in Claim 1 at column 4, lines 17-24; in Claim 12 at column 5, lines 50-61; and in Claim 18 at column 7, line 15, through column 8, line 9. It is apparent from Duke's description and claim recitations that the rotation required to turn the light on and off cannot be provided by motion of the wheel, but must be accomplished manually.

Accordingly, Duke does not describe, or even suggest a switch which is activated by the wheel motion. Duke, therefore, cannot anticipate or make obvious the present invention.

Conclusion

In view of the clarifying amendments and the remarks presented herein, Applicants respectfully submit that these claims are patentable. In addition, their respective dependent claims, which recite yet further distinguishing features, are also patentable and require no further discussion. The application should, therefore, be in condition for allowance and such action is respectfully requested as soon as possible due to actual copying of the device by an infringer.

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If the further prosecution can be facilitated through a telephone conference between the Examiner and the undersigned, the Examiner is respectfully requested to telephone the undersigned at his convenience.

Respectfully submitted,

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hereby certify that this correspondence, addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231 is being filed with the United States Patent and Trademark Office by facsimile telecopier transmittal to Group Art Unit 2875, as an Official Amendment at (703) 308-7722, on March 28, 2002.



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VERSION WITH MARKINGS TO SHOW AMENDMENTS MADE

In the Specification

On page 4, please delete the sentence beginning at line 5 and ending mid-way through line 7, and substitute the following sentence:

FIGS. 1 through 7 illustrate the present invention, a motion activated wheel light 10 for a vehicle wheel [28] 30 having an air valve stem.

On page 4, please delete the sentence beginning on line 13 and ending on line 15, and substitute the following sentence:

The housing 12 serves to connect the wheel light 10 to the air valve stem of a vehicle wheel [28] 30, as shown in FIG. 7.

On page 4, please delete the sentence beginning on line 22 and ending on line 28, and substitute the following sentence:

A motion activated switch 18 is connected to the power source 14 and to the light source 16 through the electrical circuit so as to close the circuit and energize the light source 16 responsive to movement of the wheel [28] 30, the movement being preferably rotational motion when the vehicle is moving.

On page 4, please delete the sentence beginning on line 29 and ending on line 32, and substitute the following sentence:

The skilled artisan will know that vehicle wheels [28] 30, particularly in modern vehicles having tubeless pneumatic tires,

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comprise air valves wherein the valve stem is connected directly
to the wheel rim.

On page 5, please delete the sentence beginning on line 14 and ending on line 18, and
substitute the following sentence:

As shown in FIGS. 3-5 and 7, the housing 12 preferably has
threads 15 complementary to those found on a standard air valve
stem and connects the wheel light 10 to the wheel [28] 30 by
screwing onto the valve stem.

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On page 5, please delete the sentence beginning on line 26 and ending on line 29, and
substitute the following sentence:

For example, the light source 16 itself may comprise a shape
which lights up as the wheel [28] 30 is rotating to form the visually
perceptible light image, or design.

On page 5, please delete the sentence beginning on line 31 and ending on line 34, and
substitute the following sentence:

The light source 16 itself may emit colored light, or the housing
12 may comprise material having one or more colors to thereby
produce a visually perceptible image in color as the wheel [28]
30 rotates.

On page 7, please delete the paragraph beginning on line 9 and ending page 8, line
2, and substitute the following paragraph (only FIG. references and reference numbers have
been changed):

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In another embodiment of the wheel light [10] 10', as shown in [FIG. 6] FIGS. 4-7, the wheel light includes a motion sensitive switch [18] 18' connected to the power source 14 and to the light source 16 to thereby control power flow energizing the light source 16. As illustrated in FIG. 7, the switch [18] 18' is motion activated, and more specifically, is responsive to a centrifugal force generated when the vehicle wheel [28] 30 is moving in a rotational motion. Those skilled in the art will know how to construct a mechanism as shown in FIGS. 4 and 6, comprising a biasing member, preferably a spring, calibrated to respond to an applied force so as to close an electrical contact and energize the light source 16. An embodiment of the switch [18] 18' shown in FIGS. 4 and 6 includes a first biasing member 20, a second biasing member 22, a switch contact [24] 24', and a circuit board 26 having an integrated circuit 28. When the wheel light [10] 10' is connected to an air valve stem, the applied force will be a centrifugal force generated when the wheel 30 rotates. This force will act on the wheel light [10] 10' in a downward direction, the lower end of the wheel light being at that end of the housing [12] 12' comprising the connector for the air valve stem, preferably threads 15 as shown in FIG. 7. The force moves the power source 14 toward the lower end of the housing, thereby also moving the biasing member to touch switch contact

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[24] 24' to thereby close the electrical circuit and energize the light source.

In the Claims

1. (amended) A motion activated light for a vehicle wheel having an air valve stem, said light comprising:

a connector complementary to the air valve stem for connecting said light thereto;

a power source connected in an electrical circuit;

a light source connected to said power source through the electrical circuit; and

a [motion sensitive] switch connected to the electrical circuit, said switch responsive to movement of the wheel [so as] to thereby energize the light source [responsive to movement of the wheel].

2. (amended) A motion activated light for a vehicle wheel having an air valve with a threaded stem, said light comprising:

a housing having threads complementary to the threaded stem for connecting said light to the air valve stem;

a power source connected to an electrical circuit;

a light emitting diode connected to the electrical circuit; and

a [motion sensitive] switch connected to close the electrical circuit responsive to movement of the wheel so as to energize the light emitting diode.

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16.(amended) A lighted wheel for a vehicle, comprising:
a pneumatic tire comprising an air valve having a stem; and
a motion activated light connected to the air valve stem;
wherein the motion activated light comprises an electrical circuit having a power source, a light source, and a [motion sensitive] switch sensitive to motion of the wheel and connected to close the circuit to thereby energize the light source responsive to motion of the wheel.

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24.(amended) A method of lighting a vehicle wheel having an air valve stem, the method comprising:
connecting a [motion activated] light source to the air valve stem of the wheel,
said light source activated by sufficient wheel motion; and
emitting light by causing the wheel to move sufficiently to activate the light source.

28.(amended) A method of forming a visually perceptible light image adjacent a rotating wheel on a moving vehicle, the wheel having an air valve stem, comprising:
connecting a [motion activated] light to the air valve stem of the wheel, the light capable of being activated by sufficient wheel rotation and comprising a predetermined shape for forming the light image; and
causing the vehicle to move so as to impart sufficient rotation to the wheel to activate the light source to emit light, thereby forming the visually perceptible light image.

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PTO/SB/21 (88-00)

Approval for use through 10/31/2002. OMB 0851-0031

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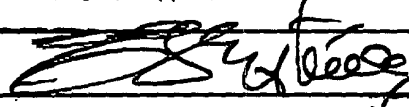
TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/766,458
	Filing Date	Jan 9, 2001
	First Named Inventor	Deutsch, Daniel J.
	Group Art Unit	2875
	Examiner Name	Laura K. Tso
Total Number of Pages in This Submission	Attorney Docket Number	22936


ENCLOSURES (check all that apply)		
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Allen, Dyer, Doppelt, Milbrath & Gilchrist, P.A.
Signature	 Enrique G. Estévez, Reg. No. 37,823
Date	MARCH 28, 2002

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Typed or printed name	Jill Dill
Signature	 Date: MARCH 28, 2002

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